

REMARKS

The applicant respectfully requests reconsideration in view of the amendment and the following remarks. Support for amended claim 1 can be found in the original claim 16. Support for newly added claim 22 can be found in the original claim 1. Support for newly added claims 23 and 24 can be found in the original claims. No new matter has been added.

A fee of \$156.00 is enclosed for the three extra claims over twenty.

Claims 1-21 remain rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0 906 373 B1 (Hubbard et al.) in view of U.S. 5,525,421 (Knoerzer). The applicant respectfully traverses this rejection.

Rejection under 35 U.S.C. 103(a)

Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hubbard in view of Knoerzer. The applicant submitted both of these references to the Examiner. Hubbard is cited at page 9, third paragraph of the specification. The applicant has two independent claims (claims 1 and 22). The difference between the two claims is that claim 1 requires the polyolefin film has an oxygen permeability at 23 °C and 50 % relative humidity of less than 1 cm³/m²*day*bar which is not required in claim 22 but claim 22 uses “consisting essentially of” language instead of comprising language in claim 1. In paragraph no. 3 of the final office action, the Examiner stated that the claimed invention is an open language, this is true with claim 1, but not newly added claim 22 which uses “consisting essentially of” language, partially open and partially closed language.

In the last Office Action the Examiner explains his understanding of the teaching and outlines the technical results of the various examples in the specification and the references. The applicant respectfully does not believe that the Examiner addresses the applicant's previous argument that the MAH modified layer does not affect any barrier of the metallized film of Knoerzer.

The applicant is in agreement with the Examiner on the following points:

Knoerzer teaches improved adhesion between the polyolefin substrate film and the PVOH if the substrate has a MAH modified surface.

VB3 (substrate with MAH surface + PVOH) shows better barrier of 1.83 than VB4 of >200 (VB4: standard substrate + PVOH).

VB3 (substrate with MAH surface + PVOH) shows better barrier property of 1.83 than VB5 of 4.72 (VB5: substrate with MAH surface + polysilicate).

Starting from these facts there are several options on how to arrive at the applicant's invention:

A person of ordinary skill in the art would either combine VB3 (1.83) with polysilicate or you combine VB4 (>200) with polysilicate or combine VB5 (4.72) with PVOH.

Again the applicant's object was to improve the oxygen barrier. Any lamination strength only is an issue when it comes to laminating the polysilicate coated film with another film to protect the polysilicate coating. Therefore lamination strength is not the primary object of the invention but a second aspect.

This raises the question, so what would a person of ordinary skill in the art derive from the facts outlined above?

VB3 is already the best. Is it to be expected that additional polysilicate can lower the O₂ barrier of VB3 from 1.83 to <1 by adding polysilicate though the polysilicate is worse than PVOH in relation to O₂ barrier? Polysilicate on MAH surface reduces O₂ transmission to 4.72, whereas PVOH on MAH surface reduces O₂ barrier to 1.83. This raises the question, why would a person of ordinary skill in the art expect that the polysilicate will still affect the O₂ barrier/transmission though it is already "minimized" by the PVOH?

The same argument is true if you compare the O₂ barrier effects of PVOH and polysilicate combined with an unmodified substrate:

VB4 of >200 (VB4: standard substrate + PVOH) versus VB6 of >200 (VB4: standard substrate + polysilicate). Both of these results are terrible.

Even if you combine PVOH and polysilicate on an unmodified substrate the result is not exciting: 6.41.

It does not matter which structure is chosen as a starting point. The key issue remains that there is a synergistic effect between the PVOH and the polysilicate only if applied to a MAH modified substrate. Such synergistic effect was completely unexpected. There is no motivation as to why a person of ordinary skill in the art would combine PVOH, polysilicate and MAH.

The applicant respectfully does not understand the Examiners argument that there is no showing that there are no adhesion problems between the PVOH layer and the polyolefin substrate if subsequently coated with polysilicate. The applicant believes that this is irrelevant.

Even if the adhesion would be improved along with the O2 barrier such effect would still not suggest the improvement of the claimed O2 barrier (see independent claim 1 and dependent claim 16). For the above reasons, this rejection should be withdrawn.

A two month extension has been paid. The applicant has authorized payment for the three additional claims added. Applicant believes no additional fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 03-2775, under Order No. 05581-00136-US from which the undersigned is authorized to draw.

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Respectfully submitted,

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